

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055150

Luminaire Tested: S122R3DR-S1005D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055150
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S1005D840-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

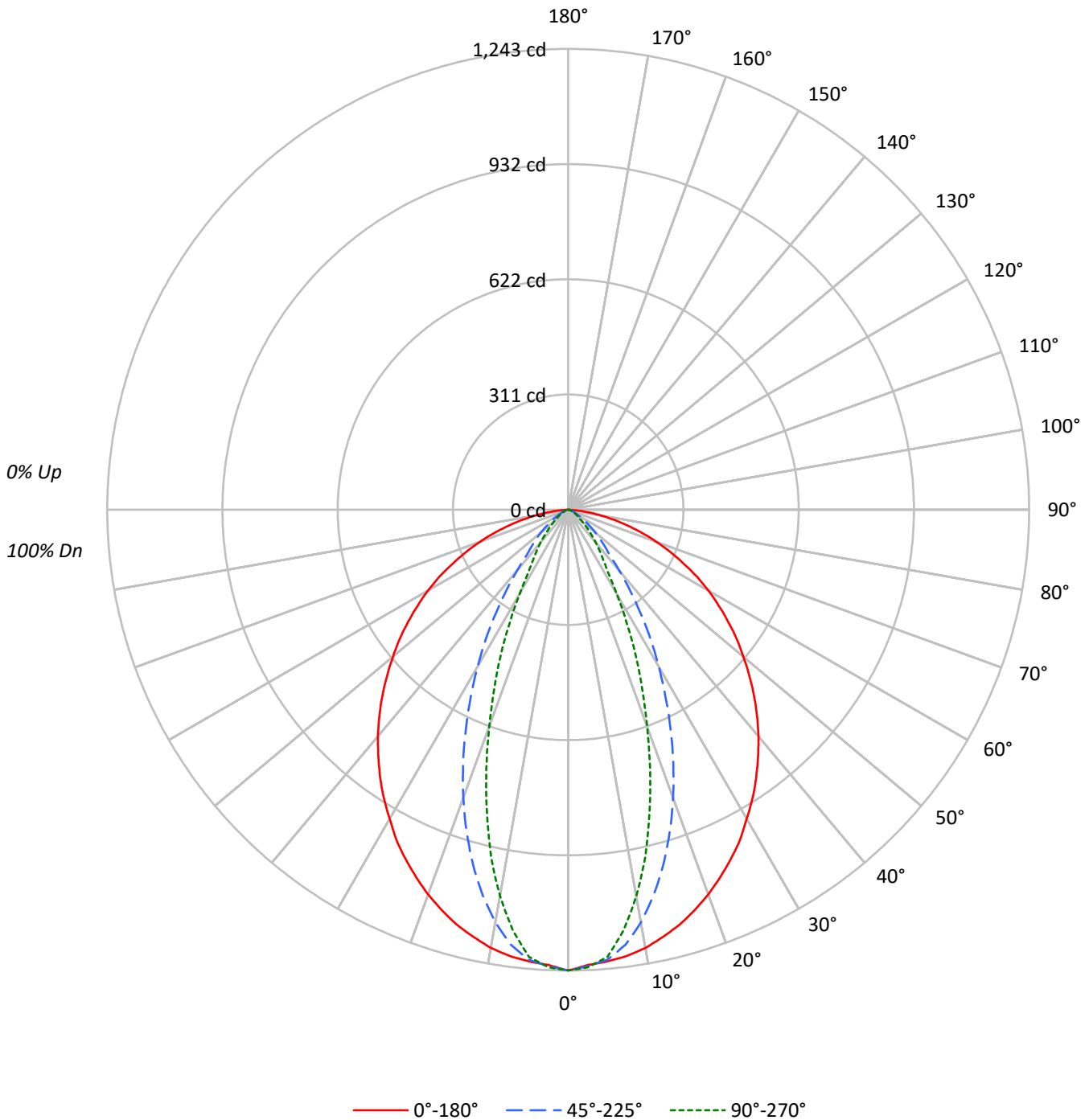
Lumens per Lamp: N/A
Luminaire Lumens: 1424.3 lumens
Efficiency: N/A
Efficacy: 34.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23546	23546	23546
5°	23259	23172	23027
10°	23088	21741	20364
15°	22733	19447	16609
20°	22263	16674	12529
25°	21713	13659	8947
30°	21059	10663	5697
35°	20432	7820	3805
40°	19739	5273	2864
45°	18975	3714	2042
50°	18180	2830	1435
55°	17407	1962	1057
60°	16562	1326	864
65°	15363	955	681
70°	14004	759	593
75°	12151	666	447
80°	9634	502	502
85°	5304	652	326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18975 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.6	8.0
10°-20°	278.9	19.6
20°-30°	318.6	22.4
30°-40°	270.2	19.0
40°-50°	201.6	14.2
50°-60°	130.3	9.1
60°-70°	72.6	5.1
70°-80°	31.9	2.2
80°-90°	6.6	0.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	711.1	49.9
0°-40°	981.3	68.9
0°-60°	1313.2	92.2
0°-90°	1424.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1424.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1223	1238	1218	1206	1211	116
15°	1159	1130	992	886	847	326
25°	1039	917	653	478	428	478
35°	883	666	338	184	164	552
45°	708	420	139	90	76	546
55°	527	200	59	37	32	471
65°	343	73	21	17	15	341
75°	166	15	9	8	6	177
85°	24	2	3	2	2	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.8	1242.8	1242.8	1242.8	1242.8
2.5°	1229.1	1247.4	1232.1	1232.1	1235.2
5°	1223.0	1238.2	1218.4	1206.2	1210.8
7.5°	1213.9	1224.5	1183.4	1146.8	1143.8
10°	1200.1	1204.7	1130.1	1073.7	1058.5
12.5°	1180.3	1169.7	1064.6	985.4	959.5
15°	1159.0	1130.1	991.5	886.4	846.8
17.5°	1133.1	1081.4	910.8	782.8	734.1
20°	1104.2	1031.1	827.0	674.7	621.4
22.5°	1072.2	974.7	740.2	572.7	519.4
25°	1038.7	916.9	653.4	478.2	428.0
27.5°	1003.7	855.9	568.1	392.9	338.1
30°	962.6	793.5	487.4	310.7	260.4
32.5°	924.5	728.0	412.7	240.6	198.0
35°	883.4	665.6	338.1	184.3	164.5
37.5°	840.7	603.1	272.6	155.3	138.6
40°	798.1	540.7	213.2	131.0	115.8
42.5°	753.9	479.8	164.5	109.7	94.4
45°	708.2	420.4	138.6	89.9	76.2
47.5°	662.5	361.0	115.8	71.6	60.9
50°	616.8	304.6	96.0	56.4	48.7
52.5°	572.7	251.3	76.2	45.7	39.6
55°	527.0	199.5	59.4	36.6	32.0
57.5°	481.3	155.3	45.7	30.5	27.4
60°	437.1	117.3	35.0	24.4	22.8
62.5°	391.4	94.4	27.4	19.8	18.3
65°	342.7	73.1	21.3	16.8	15.2
67.5°	298.5	53.3	16.8	13.7	12.2
70°	252.8	36.6	13.7	12.2	10.7
72.5°	208.7	22.8	10.7	9.1	9.1
75°	166.0	15.2	9.1	7.6	6.1
77.5°	126.4	9.1	6.1	6.1	4.6
80°	88.3	6.1	4.6	4.6	4.6
82.5°	54.8	4.6	3.0	3.0	3.0
85°	24.4	1.5	3.0	1.5	1.5
87.5°	4.6	1.5	1.5	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	19.23	20.55	19.59	20.86	21.17	5.54	6.86	5.91	7.18	7.49
	3H	21.70	22.87	22.08	23.20	23.56	6.39	7.57	6.77	7.90	8.26
	4H	22.65	23.74	23.05	24.09	24.48	6.67	7.76	7.07	8.11	8.49
	6H	23.34	24.34	23.75	24.71	25.11	6.86	7.86	7.28	8.23	8.63
	8H	23.53	24.48	23.96	24.88	25.28	6.93	7.88	7.36	8.28	8.68
	12H	23.62	24.52	24.05	24.91	25.34	6.96	7.86	7.39	8.25	8.68
4H	2H	19.01	20.10	19.41	20.45	20.84	6.11	7.21	6.52	7.56	7.94
	3H	21.50	22.39	21.91	22.79	23.20	7.14	8.04	7.56	8.44	8.85
	4H	22.44	23.24	22.87	23.66	24.10	7.51	8.31	7.95	8.73	9.17
	6H	23.19	23.88	23.66	24.33	24.80	7.81	8.50	8.27	8.94	9.41
	8H	23.44	24.08	23.91	24.53	25.00	7.90	8.55	8.37	8.99	9.47
	12H	23.57	24.13	24.05	24.62	25.09	7.95	8.51	8.43	9.00	9.47
8H	4H	22.31	22.95	22.78	23.40	23.87	7.88	8.53	8.35	8.97	9.44
	6H	23.04	23.57	23.55	24.07	24.55	8.25	8.77	8.75	9.27	9.75
	8H	23.29	23.76	23.81	24.28	24.77	8.38	8.85	8.90	9.37	9.86
	12H	23.44	23.85	23.95	24.35	24.92	8.46	8.87	8.98	9.37	9.94
12H	4H	22.26	22.83	22.75	23.31	23.79	8.00	8.57	8.49	9.05	9.53
	6H	22.98	23.45	23.51	23.97	24.46	8.36	8.84	8.89	9.35	9.84
	8H	23.25	23.66	23.76	24.16	24.73	8.54	8.95	9.05	9.45	10.02